

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference CYN208WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2018/062732	International filing date (<i>day/month/year</i>) 16 May 2018 (16-05-2018)	(Earliest) Priority Date (<i>day/month/year</i>) 27 June 2017 (27-06-2017)
Applicant CYNORA GMBH		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- the international application in the language in which it was filed
 a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box No. II)

3. **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- the text is approved as submitted by the applicant
 the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant
 the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. _____
 as suggested by the applicant
 as selected by this Authority, because the applicant failed to suggest a figure
 as selected by this Authority, because this figure better characterizes the invention
- b. none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2018/062732

A. CLASSIFICATION OF SUBJECT MATTER
INV. C09K11/06 H01L51/50
ADD.
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
C09K H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2014/183080 A1 (NITTO DENKO CORP [JP]; SHIJUN ZHENG [US]; ADAM BASIAGO [US]) 13 November 2014 (2014-11-13) page 59; compounds EM-15 page 30 compounds EM-16, EM-17, EM-22, EM-23 -----	1-14
A	EP 2 039 737 A2 (FUJIFILM CORP [JP]) 25 March 2009 (2009-03-25) page 9; compounds 1-39 ----- -/--	1

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 10 August 2018	Date of mailing of the international search report 21/08/2018
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Ziegler, Jan
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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2018/062732

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	HIROKI UOYAMA ET AL: "Highly efficient organic light-emitting diodes from delayed fluorescence", NATURE, vol. 492, no. 7428, 12 December 2012 (2012-12-12), pages 234-238, XP055048388, ISSN: 0028-0836, DOI: 10.1038/nature11687 the whole document	
A	----- WO 2017/005699 A1 (CYNORA GMBH [DE]) 12 January 2017 (2017-01-12) the whole document	1-14
A	----- DE 10 2016 108334 B3 (CYNORA GMBH [DE]) 22 December 2016 (2016-12-22) the whole document	1
A	----- DE 10 2016 110004 B3 (CYNORA GMBH [DE]) 6 April 2017 (2017-04-06) paragraph [0089] the whole document -----	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2018/062732

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
WO 2014183080	A1	13-11-2014	CN 106488965 A	08-03-2017
			JP 2016526025 A	01-09-2016
			KR 20160030094 A	16-03-2016
			US 2016126478 A1	05-05-2016
			WO 2014183080 A1	13-11-2014

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			EP 2039737 A2	25-03-2009
			JP 5624270 B2	12-11-2014
			JP 2009094486 A	30-04-2009
			US 2009072727 A1	19-03-2009

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			CN 107925004 A	17-04-2018
			EP 3138137 A1	08-03-2017
			EP 3317904 A1	09-05-2018
			JP 2018505126 A	22-02-2018
			KR 20170088822 A	02-08-2017
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			US 2018026202 A1	25-01-2018
			US 2018198075 A1	12-07-2018
			WO 2017005699 A1	12-01-2017

DE 102016108334	B3	22-12-2016	NONE	

DE 102016110004	B3	06-04-2017	NONE	
